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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/942,504 | 08/29/2001 | Shean-Guang Chang | BEAS-01063US1 | 9220 |

23910 7590 01/09/2006

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EXAMINER

SHINGLES, KRISTIE D

ART UNIT PAPER NUMBER

2141

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,504

Applicant(s)

CHANG ET AL.

Examiner

Kristie Shingles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim 5 has been amended. Claims 25-30 have been added.

Claims 1-30 are pending.

Response to Arguments

1. Applicant's arguments, see Remarks pages 8-9, filed 10/21/2005, with respect to the rejection of claims 1-24 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of *Chen et al* (USPN 6,487,170) and *Kawarai et al* (US 2001/0033581).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-11, 14-18 and 21-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Chen et al* (USPN 6,487,170) in view of *Kawarai et al* (US 2001/0033581).

a. **Per claim 1**, *Chen et al* teach the system for providing two qualities of service from a single data stream, comprising: multicasting apparatus for receiving the data stream from

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the processor and multicasting the data stream to each user for which the first quality of service choice is stored in said storage space (col.3 lines 36-53, col.11 line 56-col.13 line 40, col.14 lines 10-27, col.14 line 43-col.15 line 17; provision for multicasting QoS); and a point-to-point device for receiving the data stream from the processor and ensuring that each user for which the second quality of service is stored in said storage space receives the data stream (col.9 line 45-col.11 line 41, col.14 lines 10-42; provision for unicasting QoS).

Yet *Chen et al* fail to explicitly teach a storage space for storing at least one of a first quality of service choice and a second quality of service choice for each of a plurality of users; and a processor programmed to direct the data stream for each user according to that user's quality of service choice. However, *Kawarai et al* disclose buffers and queues that stores the QoS classes for each user wherein the data streams are classified and transmitted based on the associated QoS class along with the flow and connection information, with a separate queue provided for multicasts (paragraphs 0093, 0095-0098, 0100, 0101, 0110, 0120, 0190, 0194-0196, 0202).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Chen et al* and *Kawarai et al* for the purpose of providing a storage space for maintaining the type quality of service specific to each user connection; because maintenance of the user's particular quality of service is critical in effectively providing the selected quality of service to the user.

b. **Claims 8, 15 and 21-24** contain limitations that are substantially equivalent to claim 1 and are therefore rejected under the same basis.

c. **Per claim 2**, *Chen et al* and *Kawarai et al* teach the system according to claim 1, *Kawarai et al* further teach the system further comprising a listener adapted to listen for information sent in the data stream to one of the users of the system (paragraphs 0100, 0101, 0120, 0112-0126, 0169, 0195, 0218; *Chen et al*: col.7 lines 6-39, col.8 lines 30-53).

d. **Claims 10 and 17** are substantially similar to claim 2 and are therefore rejected under the same basis.

e. **Per claim 3**, *Chen et al* and *Kawarai et al* teach the system according to claim 1, *Kawarai et al* further teach the system further comprising a single API for providing instructions to the processor for both qualities of service (paragraphs 0100, 0101, 0120, 0112-0126, 0169, 0195, 0218; *Chen et al*: col.7 lines 6-39, col.8 lines 30-53).

f. **Per claim 4**, *Chen et al* and *Kawarai et al* teach the system according to claim 1, *Chen et al* further teach the system further comprising a thread of execution for each user selecting the multicast quality of service, the thread of execution listening on the user's behalf for a message on the multicast stream then delivering the message to the user (col.8 line 30-col.9 line 37, col.12 line 7-col.14 line 6, col.14 lines 10-27, col.14 line 43-col.15 line 17; *Kawarai et al*: paragraphs 0194-0197).

g. **Per claim 5**, *Chen et al* and *Kawarai et al* teach the system according to claim 2, *Kawarai et al* further teach the system further comprising a queue for each listener, allowing a user to receive messages for both qualities of service (paragraphs 0100, 0101, 0120, 0112-0126, 0169, 0194, 0195, 0202, 0212-0218).

h. **Claims 11 and 18** are substantially similar to claim 5 and are therefore rejected under the same basis.

i. **Per claim 6**, *Chen et al* and *Kawarai et al* teach the system according to claim 1, *Kawarai et al* further teach the system wherein said storage space may store separate choices for each user for multiple data streams (paragraphs 0120, 0121, 0202, 0217).

j. **Per claim 7**, *Chen et al* and *Kawarai et al* teach the system according to claim 1, *Chen et al* further teach further comprising a filtering device allowing a user to filter out certain messages in the data stream (col.5 lines 50-63, col.8 lines 43-53).

k. **Claims 9, 14 and 16** are substantially similar to claim 7 and are therefore rejected under the same basis.

4. **Claims 12, 13, 19, 20 and 25-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Chen et al* (USPN 6,487,170) and *Kawarai et al* (US 2001/0033581) in further view of *Baum et al* (USPN 6,850,495).

a. **Per claim 12**, *Chen et al* and *Kawarai et al* teach the method according to claim 8, yet fail to further explicitly teach the method further comprising the step of tagging each message with a sequence number so that a user can tell if a message has been missed. However, *Baum et al* teach the use of sequence numbers in packet transmission for flow and error control (col.2 lines 25-45, col.3 line 66-col.4 line 16 and col.5 line 5-col.6 line 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Chen et al* and *Kawarai et al* with *Baum et al* for the purpose of providing sequence numbers in packet messages in order to insure the proper reassembly of the packets at the receiving end. Utilizing sequence numbers in packet

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transmission protocols is a common and well-known technique in the art for providing flow and error control indicia.

b. **Claim 19** is substantially similar to claim 12 and is therefore rejected under the same basis.

c. **Per claim 13**, *Chen et al* and *Kawarai et al* teach the method according to claim 8, yet fail to further explicitly teach the method further comprising the step of tagging each message so that a user can tell the data stream from which the message was received. However, *Baum et al* teach the use of sequence numbers in packet transmission for flow and error control (col.17 lines 20-62, col.19 line 16-col.20 line 21 and col.23 line 25-col.24 line 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Chen et al* and *Kawarai et al* with *Baum et al* for the purpose of providing sequence numbers in packet messages in order to insure the proper reassembly of the packets at the receiving end. Utilizing sequence numbers in packet transmission protocols is a common and well-known technique in the art for providing flow and error control indicia.

d. **Claim 20** is substantially similar to claim 13 and is therefore rejected under the same basis.

e. **Per claim 25**, *Chen et al* and *Kawarai et al* teach the method according to claim 8, yet fail to further explicitly teach the method wherein the step of ensuring that the user receives the message includes receiving a response which delivers an acknowledgement of the receipt of data from that user. However, *Baum et al* teach acknowledgement that are sent back from the receiving user (col.2 lines 25-31, col.4 lines 9-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Chen et al* and *Kawarai et al* with *Baum et al* for the purpose of sending messages that acknowledge the receipt of data. Acknowledgement messages are commonly used in the art to ensure the receipt of messages at the receiving terminal or destination.

f. **Claim 26-30** are substantially similar to claim 25 and are therefore rejected under the same basis.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Fijolek et al* (US 6,577,642), *Krishnamurthy et al* (US 6,910,024), *Briscoe et al* (US 2005/0286488), *McNamara* (US 6,262,976), *MeLampy et al* (US 2002/0112073).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie Shingles
Examiner
Art Unit 2141

kds


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SUPERVISORY PATENT EXAMINER